

Serial No. 10/718,963
Docket No. 3994648-129161C (CPP 0004 NA)
Response date November 9, 2005
Response to Office Action of August 9, 2005

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of the Claims

Claims 1-5 (Canceled).

6. (Original) A method for delivering uniform vacuum pressure in the process of thermoforming a corrugated plastic pipe in a mold, comprising the steps of:

a. providing at least one vacuum port connected to a channel located on an external lateral surface of the mold, the channel being axially concentric with a corrugation located on an internal lateral surface of the mold, the width of the channel corresponding approximately to the width of the corrugation;

b. forming an air-tight manifold by providing an outer cover on the external lateral surface, the manifold being ported to a plurality of slits formed in the corrugation through a plurality of slots in the mold, the slots having a large cross-sectional area relative to the aggregate area of the slits;

c. connecting vacuum source to said at least one vacuum port; and

d. exerting an essentially uniform negative pressure on each one of the plurality of slots, such that the change in negative pressure across the slots is small relative to the change in negative pressure across the slits.

7. (Original) The method of Claim 6 wherein each slot has the same width.

8. (Currently Amended) The method of Claim 6 in which the relationship of the change in pressure across the length of the slits with is greater than the change in pressure from the vacuum source to the slits is $\Delta P_s / \Delta P_e = W_e D_e^3 L_e / n W_s D_s^3 L_s \gg 1$, where W_e is the width of the channel, D_e is the depth of the channel, L_e is the length of the slits, n is the number of slits, W_s is the width of the slits, D_s is the depth of the slits, L_s is the length of the channel.

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9. (Original) A method for efficiently removing heat during the process of thermoforming a corrugated plastic pipe in a mold, comprising the steps of:

- a. providing at least one vacuum port connected to a channel located on an external lateral surface of the mold that is axially concentric with a corrugation located on an internal lateral surface of the mold, the width of the channel corresponding approximately to the width of the corrugation;
- b. forming an air-tight manifold by providing a first cover on the external lateral surface;
- c. providing a second cover that forms an outer circumferential duct between the channel and said second cover;
- d. connecting a source of high velocity cooling air to an opening in the second cover; and
- e. forcing a turbulent flow of cooling air through the duct.

Claim 10 (Canceled).